ASTP (USA) MC285/3

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CC-M (The next question is to - is for Alexey Leonov. What type of space flight would you like to participate in the future?) (I am deeply convinced that all of us now - those that are flying aboard spacecraft and those who are not flying but who are watching and listening to us - all of us are participants of only the beginning of a great human journey into outer space and there will be all kinds of various space missions in the future. Of course, I would like to once again to be aboard some other spacecraft which would be able to fly for a long time around the earth so that with the eyes of an artist I could see the multi-faceted appearance of our earth a very varied colors and appearances to forever retain it into memory and to give it to people. But also we would like - I would like to be at altitudes higher than we are now. From there, the earth looks completely different. I think that at the beginning of our journey - I think that I am at the beginning of my journey and still we have - we have still a reserve of strength and age and I think we will participate in future space missions.)

The next question is for General Stafford and it's MCC-H the same as the one Colonel Leonov just answered. What kind of mis-

sion would you two like to fly in space yourselves?

Well, you're talking about the next mission. I would think, naturally, with the background and flight tests that you'd always like to fly a new and a better - well modern device and we have one coming along called the Shuttle and I would certainly like to fly that. And I would hope that if Alexey would have a vehicle developed by their country that we could fly maybe in a joint mission. And that would be why my wish that mans progress has always been a geometric progress and the benefits derived from science and technology have always helped all of mankind. I would hope that the next mission - if I do fly one - will be one of the more modern type of vehicle that could have more benefit for everybody.

SCDR (And I also agree with Tom and I'd like to say that it's - the spacecraft is one thing but another thing is with whom you're flying and I'd - this is what I'd like to point out, that I would always like to fly in space with friends to whom one trusts and who trusts in one and with whom it is not dull to work with.)

The next question is also for General Stafford. From a practical standpoint, did you find talking to each other in the listener's native tongue a desirable way to communicate during the complicated rendezvous and docking maneuvers?

(Of course it is very important) and I say of course it was necessary again - we developed this technique out of working together over a period of nearly a year and that was over a year and a half ago that we determined that, if we would listen to the other person speak in your own tongue, the individual would speak slower, also more distinctly, and would make fewer mistakes. And so it worked out beautiful as you saw in the rendezvous and the end results you saw on television and what you're seeing now is. It's also been a great experience for us

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as far as a - way of communicating with each other. Over.

CC-M (And the last question to Alexey Leonov. How do you think that - how important do you think the rescue capabilities that was demonstrated on this flight will be in future space missions?)

SCDR (We - when we began working on the Apollo/Soyuz program, the first part of our program was the working - out of a rescue system and of a single, andrygnaus docking unit and testing of that unit. And now we can say that we have done - we have completed the major part basic part of this program. We have tested these docking units. They work well and they hold us together tightly - strongly. This was the beginning of a large effort in standardizing future systems not just with both our governments or both our countries because future spacecrafts of our country and of the United States would use such units, but we will suggest that other states - other countries which will dev begin developing in this direction, we suggest that they should also have standardized docking units so that they would be able to perform any kind of service and render any type of assistance to other crews in space. And it is pleasant to us that the beginning of this great grandiose human effort in space has been initiated by our crews here - by our crews of the spacecraft Apollo and the crew of the spacecraft Soyuz. Thank you very much.)

MCC-H The next question is for Vance Brand. Now that Americans have met Russians in space on an international venture for the first time, what do you think the chances are for a joint manned exploration of a planet?

CMP Well I - I think frankly that the chances are very good.

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MCC-H Russians in space on an international venture for the first time. What do you think the chances are for a joint manned exploration of a planet?

CMP Well, I think frankly that the chances are very good but I don't think it will happen right away. They say that - well, it would probably take at least 20 or 30 years before we would be ready as a world to go out and explore a planet. I think that's probably reasonable. The only thing, in everything else that we have done, in aviation for example, we've found that progress is always much faster than we expected. So perhaps the time will come when we will be thinking of exploring planets, probably together - within the next 20 years. I think that would be the way to do it. I think it would save us time, effort, money; it would pool resources, it would - in other words, it would be interesting and it would bring ben - bring back benefits to the whole world.

MCC-H Thank you, Vance. The last question is for General Stafford. And it is the same as Colonel Leonov just answered, and that is how important do you think the rescue capability demonstrated on this flight will be in future missions?

ACDR Well, when - as long as you have motion, you're going to have accidents. Needless to say that - we do all our - our utmost of our efforts to minimize all the risk. However, after a long period of time, you could conceivably and possibly have some mishap that would require a rescue. The total system we have demonstrated here - the new docking device, the rendezvous system using techniques from both countries, the communications procedures and techniques - could be available in the future if required. Not on an instant's notice but it could be available. So I think we have taken a great step that indeed we have opened a new era in the history of man on this and it will be beneficial. Over.

MCC-H Roger, Tom. Thank you. That was the last question. I'll now bring the press conference to a close and you gentlemen can get back and continue your work. (Press conference is over. Thank you.)

(Garble) SPKR MCC-H (Good flight.) Thank you very much. USSR SPKR Thank you. Valeriy, can you read me? SCDR Loud and clear. SFE Thank you. SCDR SFE Okay. CC-H Command module, Houston.

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                    Valeriy, how do you read me?
     SCDR
     SFE
                    Loud and clear.
     CMP
                    Thank you.
     SCDR
                    Okay.
     CC-H
                    Command module, Houston.
     DMP
                    Go ahead, Bo.
     CC-H
                    On panel 181 we would like the 3 TV power switches
OFF.
     CC-H
                    Command module, Houston.
     DMP
                    Go (garble).
     CC-H
                    Roger. We've been having some problem with one of
the TV cameras and we would like to take the TV camera that is now on
871 in the DM and substitute it for the camera that is now in the TSC
which will go into bracket 11 for the tour.
     DMP
                    Okay, you want to use the 871 camera on panel 11.
     CC-H
                    Roger. There is a camera now in the TSC that's going
on to 11 and we would like the 8 - camera that's in 871 to go onto 11.
     DMP
                    (Garble.)
     CC-H
                    And you'll have to disconnect them and hook them up
again as they are swapped.
                    And Apollo, those cameras may be a little warm, so
you may have to hold off for a few minutes before you can change them
out. And we have on other thing and that is TV 2.9, the shoe should be
on the right instead of the left.
                    That's TV 2.9. Stand by and let me check that.
     DMP
     CC-H
                    That's the one that's going to be looking out the
window.
                    Hey, Vance - -
     ACDR
     USSR
                    (Russian)
                    Houston, (garble).
     ACDR
     CC-H
                    Roger.
     ACDR
                    Apollo. How do you read?
                    Houston reads you loud and clear if you have a moment.
     CC-H
     MS
                    (Garble)
     DMP
                    They read you fine, Tom.
                    Okay. The battery finally went dead on the Nikon
     ACDR
flash. When you come over on transfer 4 will you or Vance, either one,
dig out a spare battery for the Nikon. I think it's in B5.
                    Yeah. I think you're right. Okay.
     DMP
     ACDR
                    Thank you.
     ACDR
                    Bo, how's the weather back in Houston?
                    I'll have to ask somebody; I haven't been out in
     CC-H
quite a while.
     ACDR
                    Yeah, I could imagine; I could imagine.
                    And we'd like the phone-mike connect switch OFF.
     CC-H
                    Mike connect to OFF. (Garble) Houston.
     ACDR
     CC-H
                    And we're just about to go LOS; we'll be AOS at MILA
at 78:21.
     ACDR
                    Copy.
     CC-H
                    Apollo, Houston through Wallops. How do you read?
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ASTP (USA) MC287/2

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USA

He reads us.

CC-H

Apollo, Houston through Orroral. How do you read?

ASTP (USA) MC288/1 Time: 13:10 CDT, 77:50 GET 7/18/75

PAO This is Apollo Control. Loss of signal through ATS-6 satellite and unsuccessful attempt at communications through Orroral Valley tracking Austra - tracking station in Australia. That was only about 2 degrees above the horizon to the south of that station. Unsuccessful in establishing contact at that low elavation angle. We're some minutes away from Merritt Island Launch area, acquisition through that station in Florida. During the last revolution, the in-flight joint press conference was conducted with the commanders aboard Soyuz and the other 3 crewmen aboard Apollo. Questions from the two control centers were read up as submitted by correspondents in Moscow and Houston. Houston cap comms were Carol (Bo) Bobko and Valeriy (garble). In Moscow were Bob Overmeyer and Vladimir Johnny Bekov. We'll return in 29 minutes at Merritt Island launch area. This is Apollo Control at 77:52 ground elapsed time.

ASTP (USA) MC289/1

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PAO Apollo Control. Ground elapsed time 78 hours 20 minutes. 56 - 36 minutes away from the 4th transfer of the Sovuz and Apollo crews, with Kubasov and Slayton going to the Soyuz. On this pass across the States, Deke Slayton will be performing the Earth Observation Experiment. As Apollo crosses the Yucatan Peninsula, he will take photographs, looking for the eddies in the Yucatan Channel. And also, as the spacecraft passes over the Gulf, he'll be trying to determine if he can photograph and visually observe the Florida current in the strait of Florida. As Apollo passes over Tampa, he'll be asked to describe whether or not he's able to see the Red Tide, west of Tampa Bay. And again, Red Tide will be the object of photographs as the vehicle passes over the Cape Cod area. On this pass up the east coast, Vance Brand will describe in Russian, as he photographs in television, as the vehicle passes up the east coast of the United States. Acquisition in 19 seconds, through MILA. We'll bring the line up for Cap - Capcom Bo -

CC-H - Apollo. Over.

CMP Roger, Houston. How do you read?

CC-H Roger. We read you loud and clear. We need the camera switches on, on 181.

CMP Okay. We have all 3 on.

CC-H Roger. We're not getting any TV here yet. We should, in a second, and I can tell you about the picture.

CC-H Command Module Pilot, Houston. We have about a 90-second wait here, until we get a warmup. Let me give you a bit of a weather briefing. Florida looks like it will probably be clear, as will New York. But there are quite a few clouds over the middle Atlantic coast.

CMP Okay.

CMP Okay. I can see the coast of the U.S. coming up.

CC-H Vance, we're getting a good picture. You're clear to start your tour.

CMP (Good day, dear friends. We find ourselves now - Okay. (Garble), Deke Slayton, and I - I)

CC-H (Garble) your phone mike connect switch to ON.

SPEAKER (Garble.)

DMP Okay. We got the phone mike on, Bo.

USSR (Moscow, this is Soyuz. How do you read me?)

CMP (Dear television viewers of the Soviet Union. At the present time, we're going to make a little tour over the eastern part of the United States. This is a 6-minute tour, since we're flying with the speed of approximately 8 kilometers a second. This part of the United States is - about 200 years ago - This place developed about 200 years ago. Here, most of the industrial concentration of the United States is located. It's composed now of 50 - the United States is composed of about 50 states, and it will start with Florida. At the present time, we're flying over sunny Florida. It's a very warm

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climate in Florida - about - over 200 sunny days a year. There's much exotic forms of nature, a lot of citrus fruits. In this peninsula, there are many palms, citrus groves, and various other types of growth. Also, many alligators and crocodiles. Here, there is located the Kennedy Space Center. Among all the flights that took off from the Kennedy Space Center we, also, took off - on this flight. It's very difficult to see the Earth at the present time, because there is some cloudiness below us. At the - in the middle of your screen we see North Carolina. Only 72 years ago, the first airplane flew in this state. At the present time, in the horizon, we see the Blue Ridge Mountains. On the right, there is the state of Virginia.)

USSR (Apollo, this is Soyuz.)

the site of many battles, the birthplace of many presidents. In the 17th century, the first settlements appeared in the state of Virginia. We now can almost see Washington, to the left of us. Of course, this is the capital of the United States - the political and cultural center of the United States. To the left - now, there is - you can see New York, the largest - one of the largest cities in the world. Around us, also, we see several other states: Massachusetts - the Goddard Space Center. In 1920, Dr. Goddard flew one of his first rockets - experimental rockets. We hope that the cooperation and understanding between our two countries is developing with the same speed as the speed that Dr. Goddard's rocket first flew. Thank you for your attention and for listening to us on this tour.)

CC-H Thank you, Vance. You came through loud and clear. Unfortunately, there were quite a few clouds there, and we couldn't see an awful lot of the east coast.

CMP (New England, to the north and in the center of our screen. We saw a lot of -)

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     CMP
                    ( - New England to the North and in the center of
our screen, we saw a lot of cloudiness, so we couldn't really tell you
enough.)
                    (Russian)
     CC-H
     CMP
                   Rog.
     USSR
                   Thank you very much, Vance.
                   (I got ya. Be nice for us to get a geologist in here,
     USSR
so you could measure some of the things we see.)
                   (I couldn't understand you. Why don't you repeat
     USSR
that? Over)
     USSR
                   (I'm repeating again. 3:37 MILA, 3:47 (garble).)
     USSR
                   (That's good, okay.)
     SFE
                    (You want Valeriy, right?)
                   Valeriy, how do you read me?
     SCDR
                   (Russian)
     ACDR
     SFE
                   (Russian)
     CC-H
                   Command module, Houston. Standing by for ATS
acquisition.
     CMP
                   Okay. You should have it, Bo.
     SFE
                   (We had a connection 347 hooked up. 347.10)
                   (347.10 we had two connectors hooked up.)
     SCDR
                   And, Apollo, Houston. We'd like to remind you go
     CC-H
to POO at this time.
     SFE
                   (Russian)
     CC-H
                   Apollo, Houston. We;d like to remind you to go to
POO at this time.
     SFE
                   (Russian)
     CMP
                   Okay. You have POO.
     CC-H
                   Thank you.
     USSR
                   ('He connected - connected 347.10 to TK 1.)
                   (Kubasov - Dubasov -)
     SCDR
     SFE
                   (Valeriy, yeah, who's calling me?)
                   (Kubasov)
     SCDR
                   (Yeah, who's calling Soyuz II?)
     SFE
     SPKR
                   (Garble)
     SFE
                   (What's the matter?)
                   (Listen, did you connect TK3 connector, ober there?)
     SFE
     CC-H
                   Command module, Houston.
                   (I roger that.)
     SCDR
                   Go ahead.
     CMP
     CC-H
                   Just a reminder -
                   (Moscow, this is Soyuz, how do you read me?)
     SCDR
     USSR
                   (Russian)
     CMP
                   Gee, Bo, would you try again. You were cut out
over there.
     CC-H
                   Roger. It was just a reminder to give Valeriy his
meal, so he can take it back to the Soyuz with him.
     CMP
                   Roger.
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CC-H Apollo commander, Houston.

ACDR Go ahead, Bo.

CC-H I know you don't have a docking module checklist, but on this next transfer on step number 26 we would like you to delete the steps where you take the DM/Soyuz tunnel vent isolation and open it, and a DM Soyuz tunnel vent to vent. I'll call those out again when we get into the transfer. And the reason is, that Soyuz is going to be performing a check on the tunnel 2 integrity and we do not want this dumped to tunnel 2 vent, to vacuum.

ACDR Okay, Roger. Do you want to take it out and get to the normal pressure down to - norm pressure minus to 60?

CC-H It goes down to 50 and then we'll just leave it there and we'll finish it at some later time.

ACDR Okay, I understand that you just want us to take it to 50.

CC-H Roger.

ACDR Okay, real good.

MS (Garble)

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                   Houston, Apollo.
     ACDR
     CC-H
                   Apollo, Houston. Go ahead.
     ACDR
                   Roger. Do you want to cover this presentation of
seeds and these medals on TV? Over.
     CC-H
                   Roger. And we see you on TV now.
     MS
                   (Garble)
     MS
                   (Russian)
     CC-H
                   Command module, Houston.
                   (Garble)
     USA
                   On panel 10, we would like to request you to check
     CC-H
the S-band thumbwheel to 3.
                   (Russian)
     CC-H
                   Command module, Houston.
                                             Over.
                   (Russian)
     MS
     CC-H
                   Command module, Houston. That was the FM thumbwheel
to 3.
                   Okay, Bo. You ready?
     ACDR
     CC-H
                   Roger. We can see you holding the box there.
     ACDR
                   Okay. (I'm beginning. Allow me to present to you
on behalf of the United States of America to give your people and your
government a present of the United States; a present to your people.)
                   I am sure good trees must grow from these seeds.
     SCDR
     CC-H
                   Apollo commander, Houston. We're not reading Alexey.
                   Okay. Say again, Bo. See that?
     ACDR
     CC-H
                   We read you but we didn't read Alexey during the last
part of his acceptance.
                   (How do you read me?)
     USSR
     CC-H
                   Now we read you, Alexey.
     ACDR
                   (This joint medal for the Soyuz- Apollo mission between
the United States of America and the Soviet Union.)
                   Just hold it for a second, Tom. It's a little bright.
Maybe the camera will be able to pick it up. We can see that it says
Apollo-Soyuz and it shows - -
                   (Good evening dear television friends. It's 22 hundred
hours in Moscow time. The terminating final activities are going on on -
board our two spacecrafts.)
     CC-H
                   Still lower, a little lower.
                   (The present time onboard the Soyuz spacecraft we have
     SCDR
the Apollo commander, Tom Stafford, and in the Apollo, Valerey Kubasov
together with Deke Slayton and Vance Brand. Our joint activities are coming
to an end and we will have our fourth and final transfer coming up soon.
The joint operations include Tom Stafford's transmittal to me of a box of
seeds of, very fast and rapidly growing pine trees. They should grow very
well and very rapidly in a good climate when they are planted on our Soviet
territory. The joint operatons also include an exchange of medals. One-
half of the medal was placed on the Apollo spacecraft, and the second half
of the medal was placed on the Soyuz spacecraft. And now here together in a
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orbit of the Earth, we will be connecting these two halves of the medal. The medal is an emblem of our joint flight, joined in docked spacecrafts, Apollo and Soyuz with the two U.S. and U.S.S.R. flags side by side. I'm

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taking this medal and handing it over to Tom Stafford, and Valeriy Kubasov will be taking the other medal from the other spacecraft and bringing it here back to us.)

ACDR Okay. (Thank you very much.)

SCDR (What have we done in this time? We had very saturated program - had to do quite a number of operations in a very limited amount of time. We had to do a series of transfers, also watch the systems on board our spacecraft. All this requires very careful monitoring, very careful observations. Also, at the same time we had to perform a whole series of reports, still pictures, movies. We only had five people here between the two spacecrafts - five crew members, and that's really not enough people to do all the things that we had to do, but we had to find a way to do it.)

ACDR Okay, Houston.

CC-H Roger, Apollo. We saw the joining the medallion. We got a good picture of the medallion on our TV.

ACDR Okay. Command module (garble).

SCDR (Who turned it off? We really shouldn't have anything

bother anybody.)

CC-H Vance, how do you read?
CC-H Deke, how do you read?

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     ACDR
                    Deke, how do you read?
     CC-H
                    Apollo Commander, Houston.
     ACDR
                    Okay. I was just trying to get through to see if
the - Deke or Vance are putting the dias together with Valeriy. We're
going to say something on TV and I was listening to (garble).
     CC-H
                    Roger.
     USA
                    (Garble)
                    Command Module, Houston.
     CC-H
     CMP
                    Go ahead.
     CC-H
                    We see you there with the medallion and we'd like
to have the filter adjusted so that the couch lights don't blossom in
the picture.
     CMP
                    (Yea, we don't have the filter. Roger.)
     CC-H
                    And Command Module, Houston. We'll be standing by
for the clock sync in 3 minutes here.
                    Command Module, Houston. We didn't hear you, although
you looked like you were talking to us here just a minute ago.
                    Vance, how do you read, I haven't been reading you
     ACDR
at all.
                    Okay Houston. Reading you loud and clear and Tom
     CMP
reading you loud and clear.
                    Okay. I can read you now.
     ACDR
                    Roger. We can understand you now, Vance and we'd
suggest you get the clock sync on time and then proceed with some
of these other activities.
     CMP
                    Okeydoke.
     CMP
                    (Soyuz, this is Apollo.)
                    (Garble now do you read me?
     SCDR
     CMP
                    (Good Alexey. We've got about 50 seconds to time sync.
     CMP
                    (Getting count down now. 7, 6, 5, 4, 3, 2, 1, MARK.
     SCDR
                    We are synchronized.
     CMP
                    (That's good.)
     CC-H
                    We copy that clock sync.
     CC-H
                    Apollo, Houston - or Command Module, Houston.
     CMP
                    Go ahead.
                    The lights are in - in our picture are blossoming
     CC-H
pretty badly, perhaps you could either get the filters on them or block
them in some manner.
     CMP
                    Filters are on, Bo.
     DMP
                    We're looking for the big camera filter, Bo.
     CC-H
                    Understand.
     ACDR
                    Hey Vance, it was either back on the one in 605 or in F2.
     CMP
                    Roger. Not in F2.
     CC-H
                    Command Module, Houston. We ho - heard the Apollo
Commander before ask for a set of Nikon batteries, to save you the
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problem of looking up where they are, they're in B5.

ASTP (USA) MC292/1

ASTP (USA) MISSION MC293/1 Time: 14:20 CDT, 79:00 GET

Date: 7/18/75

CC-H Command Module, Houston. We hold - heard the Apollo commander, before ask for set of Nikon batteries, to save you the problem of looking up where they are, they're in B-5.

ACDR Got you.

ACDR Okay, Bo, if you're reading, I got the 35 flash

battery.

CC-H Negative, we did not read, but we do now, thank you.

CC-H Apollo Commander, Houston.

ACDR Go ahead, Bo.

CC-H Looks like you're having fun - if you'd like to tell us about any of the things you're doing, we'd be anxious to hear.

ACDR Oh, okay. - well, we're just finishing up - the third period up here, and - relaxing a little bit. We've had a wonderful experience here. And Alexey, and I are looking at the procedures to go through now. We also had a snack.

CC-H We saw the snack.

ACDR Bo, are you sending the TV over to the Soviet Union at this time? Over.

CC-H Roger. All the TV we get goes to the Soviet Union.

ACDR I'd like to just say hello to the people there.

CC-H I think we've got time.

ACDR Okay. It will take about a minute or two.

CC-H Roger. I think we've got the time.

ACDR (Dear Soviet television viewers, allow me as the representative of the United States of America to transmitt to you best regard, from the people of the United States. This is a happy time for the whole crew. We're happy, very happy to receive - to be together here in the first international flight after two years of joint preparation and training. We astronauts, and cosmonauts, - not only - not only have worked together, but we've become good friends. I'm sure that our joint work, friendship, will continue, even after this flight. I too am sure dear television viewers, that this flight will open the way to further cooperation and friendship between our two countries. The - yesterday's - let the things that went on yesterday in our flight and today be a good thing for both of our peoples. Thank you, and good luck.)

CC-H (Russian)

DMP Say, Bo, are you reading the DM?

CC-H Roger, docking module pilot, read you loud and

clear.

DMP Okay, which TM's or TV do you want back here. We took one out, you know, and I'm supposed to check the monitor and we got nothing here right this minute.

USSR Ladies and gentlemen of the press. You can see with me Tom Stafford, the Soyuz - Apollo commander.

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CC-H

DMP

DMP --(garble) which the TM's or TV do you want back in here. We took one out you know. I'm supposed to check the monitor and we've got nothing here right this minute yet.

SCDR Ladies and gentlemen of the press. You can see with me Tom Stafford Soyuz Apollo Commander. Today in space the orbital module of the Soyuz spacecraft the representatives of two countries Soviet Union and the United States - United States and Soviet Union. We are conducting our Soviet - our joint with American flight because our people have - our governments wants to work together in spirit of cooperation between our countries, because in order (garble in American and in the Soviet Union did a great job to make this flight possible. We worked together during - for 2-1/2 years. We - I know each other very well. I know Tom Stafford, Deke Slayton, and Vance Brand like a very hard-working guys. We like to work together again. Before our joint flight we were a lot of times in the United States and their American astronauts were a lot of times in the Soviet Union. Everytime we knew each other better and better. We know a lot about American people - about American customs. We know what the American people want. I am very glad that today we work, we are working in space together with our good friends, Tom, Deke, and Vance. I'm sure that our joint flight is the beginning of very great cooperation in space. Thank you very much.

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(Thank you very much Alexey.)
     CC-H
                    Docking module pilot, Houston.
     DMP
                    Go ahead, Bo.
     CC-H
                    Deke, we would like you to place the camera in the
position of H71 where you got the old one out.
                    Yeah, but which one?
     DMP
                    You just want to replace the one underneath 71 that was
there?
     CC-H
                    The one that was in the TSB that should have gone on
position ll - -
     SPKR
                    Hey Deke, (garble).
     CC-H
                    - - should go into H71, because you took the one from H71
and put it in 11.
     DMP
                    Okay, I thought you wanted the TSB (garble) because it
was a bad camera.
     CC-H
                    Roger, it is but we think it will work better in the DM.
     DMP
                    Okay.
     SCDR
                    Deke, how do you read me?
     DMP
                    (Russian)
     SCDR
                    (Garble) now?
     DMP
                    (Russian)
     SCDR
                    (How do you read me?)
```

Go ahead, Bo. (Garble). I'm in the DM.

Command module, Houston.

ASTP (USA) MC294/2

Time: 14:32 CDT, 79:12 GET

7/18/75

CC-H This is for the Command module. We are going to have a couple minutes od date here. We're finished with TVs. We would like you to go down to 181 and turn the TV power switches OFF.

USA Hey Bo, for your information, I'm looking up this in H71 TV to (garble).

CC-H Command Module Pilot, or Docking Module Pilot say again please. You had quite a bit of background noise.

DMP Let me take to the TV on H71 to (garble) TV station.

CC-H I understand you're putting it on H71.

DMP Yeah, that's where you said to put it.

CC-H And we've got about a minute and a half until we go LOS. We're gonna be at Vanguard at 79:31. That's about 36 minutes transfer time and if the command module did not hear, we would like the TV power switches OFF.

PAO This is Apollo Control. Ground elapsed time 79 hours, 20 minutes. Loss of signal through the ATS-6 satellite. Next acquisition will be Vanguard. We'll start the change of shift briefing with flight director Pete Frank in a few moments at the main auditorium, Building 2. We'll record any air-to-ground through the Vanguard and stateside pass and play - play that back when the change of shift is completed. Change of shift briefing will begin in the Building 2 auditorium immediately with Flight Director Pete Frank. At ground elapsed time 79 hours, 20 minutes, this is Apollo Control.

ASTP (USA) MC295/1

Time: 15:14 CDT, 79:54 GET

7/18/75

weakly.

Apollo Control. Ground elapsed time 79 hours and 54 minutes. Acquisition coming through Goldstone tracking station in 2 minutes and 55 seconds as the crew slightly behind in their timeline, approximately 10 minutes behind in the flight plan. They're getting close to the final farwells between the Apollo and Soyuz crew. Closing out of hatches and pressurizing the tunnel. We have 1 minute and 45 seconds accummulated tape taped during the press change of shift briefing. We'll play that now and then go live through the Goldstone pass. Apollo, Houston. Through Vanguard for 7 minutes, CC-H standing by. (Russian) DMP (Russian) ACDR Docking module pressure 24 minus millimeters. USSR DMP Deke, (garble) pressure equalization (garble) seven USSR minutes. (Russian) DMP Houston, Apollo. DMP Apollo, Houston. Go ahead. CC-H Bo. You want to pass on this action. DMP Apollo, Houston. We don't think you can gain any CC-H time by deleting, since Soyuz is going to be doing their pressurization. Roger. DMPApollo, Houston. Through Rosman, over. CC-H Roger. Loud and clear. CMP We have you for a couple of US stations and then ATS. CC-H Okay. CMP (Garble) Bo, we're all over the (garble) microbial DMP exchange. Roger. Understand, you're in the microbial exchange. CC-H DMP Right. Apollo, Houston. There are 30 seconds until LOS, we'll pick you up at Newson-Newfoundland for a few seconds and then ATS. CMP Okay, Bo. (Garble) USA Through Newfoundland and then ATS. Apollo, Houston. CC-H CMP Okay Bo. - - step 16. (Garble) DMP Roger, understand. Step number 16 and if you have a CC-H DM checklist in your hand, would you go to page 516, step 26. DMP Go ahead. Deke, did you answer me. I thought I heard you very CC-H

```
ASTP (USA) MC295/2
Time: 15:14 CDT, 79:54 GET
7/18/75
                   Rog. Standing by for your info on step
     DMP
26.
                   Roger. Where it says AC DM Soyuz tunnel vent iso-
     CC-H
lation OPEN and DM Soyuz tunnel vent VENT cross those two steps out
temporarily and the Soyuz crew will give you an okay to vent the tunnel
to VACUUM.
                   Can we do that later (garble).
     DMP
                   (Russian)
     USSR
                   They'll give you that okay later perhaps 20 minutes
     CC-H
or half hour later.
     DMP
                   Okay.
     DMP
                   (Garble).
                   (Garble).
     USSR
                   (Russian)
     USSR
                   (Garble)
     DMP
                   (Russian)
     USSR
                   (What time did you say?)
     USSR
```

```
ASTP (USA) MC296/1
Time: 15:24 CDT, 80:05 GET
7/18/75
     USSR
                   (What time did you say?)
                   (It is 54:20 - Bravo.)
     USSR
                   Command module pilot, Houston.
     CC-H
                   Go ahead, Bo.
     CMP
                   In your flight plan down on page 4234, there's a note
     CC-H
to roll left to 60 degrees. We would like to change that to 100 degrees.
                   Roger. At 80:54 roll left 100 degrees instead of
     CMP
60.
     CC-H
                   Roger.
                   (Russian)
     USSR
                   (Russian)
     USSR
                   (We'd like to sleep some more but we don't have the
     USSR
time. Last night we only got five hours actually. It's okay. We feel
pretty good.)
                   Command module, Houston. On panel 181 we would like
     CC-H
the three TV camera switches on.
                   Command module, Houston. We would like the three
TV camera power switches on panel 181 turned on.
                   They're on Bo.
     CC-H
                   Thank you.
                   All ready.
     CMP
                   Yes, Soyuz. We're experimenting (garble) with
     USSR
(garble) liquid nitrogen.
                   And Vance, we're getting a good picture of you there
in the command module.
     CMP
                   Okay.
     ACDR
                   Okay.
                   Okay, Bo. We're hooking up the TV cameras in
     ACDR
the orbital module to DM 1 on the docking module.
                   Thank you for the report.
     CC-H
     USSR
                   (Russian)
                   Hey, Bo, (garble) switching these things is that we've
     ACDR
got 2 hooked into 1 and vice versa from what the checklist called for
after we got through with the switching around here. I think we got the
right cameras but they're going to reach in different (Garble).
     CC-H
                   Okay.
                   Okay. DM 2 power's ON and that's the power that
     USA
goes into the orbital module 1, Bo.
                   Roger. Understand.
     CC-H
                   I'm sorry, it's DM l goes into the orbital module
     USA
now.
     CC-H
                   Understand.
END OF TAPE
```

```
ASTP (USA) MC297/1
Time: 15:34 CDT, 80:14 GET
Date: 7/18/75
                    (garble)
     USA
                    Bo, how do you read me now?
     ACDR
                    Apollo, Commander, we read you fine.
     CC-H
                    Okay, I'm hooked up back on the docking module audio.
     ACDR
                    Understand.
     CC-H
                    (garble)
     USSR
     CC-H
                    Command module, Houston.
                    Go ahead.
     CMP
                    On panel number 10, we would like to check the VHF,
     CC-H
FM, thumbwheel no higher than 3.
                    Okay, you're echoing - echoing, but, understand on
     CMP
           The VHF - VHF FM thumbwheels on 3.
9 and 10.
                    Negative, on panel 10. Panel 10 only, VHF thumbwheel
     CC-H
on 3.
                    Okay, you're echoing badly, but I took that to mean
     CMP
those two panels VHF thumbwheel on FM on 3.
                    Negative, only on 10.
                    For sure. Thank you.
     CMP
                    That's good.
     ACDR
                    And the S band thumbwheel all the way decrease.
     CC-H
                    Which thumbwheel?
     CMP
                    S-band decrease.
     CC-H
                    For sure, S-band decrease. It's already there.
     CMP
Full decrease.
     CC-H
                    Roger. Copy.
                    Command module, Houston. Are we still echoing?
     CC-H
                    No, you just got rid of it, Bo.
     CMP
     CC-H
                    Thank you.
                    Sound good now Bo.
     ACDR
     CC-H
                    Thank you.
                    Docking module, Houston. Are your televisions set
     CC-H
up yet so that we can turn on the TV in the DM?
                    Roger, you're all set. Yea, they've been up for a while
     They're already turned on.
     CC-H
                    Thank you.
                    Command module, Houston.
     CC-H
                    Go ahead.
     CMP
                    On panel 181, we'd like you to check or verify that
     CC-H
the CM-DM camera power switch is ON.
                    Okay. Yea, that's verified. It's ON.
     CMP
     CC-H
                    Thank you.
                    TV station select is on CM however. Would you like
     CMP
```

Roger. We'd like that UP TELEMETRY.

And docking module, we have a good picture.

You've got it.

Okay.

END OF TAPE

that - UP TELEMETRY?

CC-H

CC-H

CMP

DMP

```
ASTP (USA) MC298/1
Time: 15:44 CDT, 80:24 GET
7/18/75
     MS
                   (Russian)
     DMP
                   (Russian) (We hope - -)
                   (We wish you the best of success. I'm sure that
we've opened up) a new era in history of man.
                   (Our next meeting will be on the ground.)
     DMP
                   (Step 20, Valeriy.)
     SFE
                   20 is completed.
     DMP
                   Hey Vance, do you read?
     DMP
                   Vance, you read?
     CMP
                   Yes, I read. Go ahead Deke.
     DMP
                   Okay they're delivering (garble) 6 VHF FM to RECEIVE,
AM OFF, audio control NORMAL, verify power OFF.
                   Okay. That should work.
     CMP
     CMP
                   Power coming OFF now.
     DMP
                   Okay Vance. At (garble) FM PR, AM PR (garble.
```

ASTP (USA) MC299/1

Time: 15:54 CDT, 80:34 GET

Date: 7/18/75

ACDR (Yeah, this is your step.)

ACDR Okay, Bo. Valeriy is working on their hatch getting

things set up for the EVA eclipse.

CC-H Roger. Copy.
ACDR Solar eclipse.

ACDR Okay, They're closing hatch 4.

CC-H Roger. We see it on TV.

ACDR (Garble) is closed, hatch 3 is closed (garble)

CC-H Hatch 3 is closed. ACDR Vance, you read?

DMP Vance, you read? Read us? Hello, there.

ACDR Vance, how do you read?

ACDR Vance, you read?

USSR (Garble)

ACDR Soyuz, how do you read me?

CC-H Houston, read you.

CMP How do you read, Tom?

ACDR Loud and clear, Vance.

CMP Okay, I assume you got the cable disconnected okay.

ACDR Yeah, right, yeah, the cable's disconnected. We

called you.

CMP Okay, we must be out of configuration. Didn't get it.

ACDR Okay, Vance would you set MASTER on the CM camera?

CMP Roger, MASTER on the CM.

```
ASTP (USA) MC300/1
 Time: 16:04 CDT, 80:44 GET
 7/18/75
      CMP
                    Houston, Apollo.
      ACDR
                    Houston, - -
      CMP
                    Houston, Apollo.
      CC-H
                    Apollo, Houston. Go ahead.
                    Roger. I have the P52 results for you.
      CMP
      CC-H
                   Ready to copy.
     CMP
                    Okay, stars 33 and 35, down 05, all balls, down 93,
plus 00129, minus 00084, minus 00088 and it was torqued at 4300.
                   Roger, I understand. 33, 35, all balls, plus 00129,
minus 00084, minus 00088 and that was torqued at 080 4300.
     CMP
                   Roger.
     ACDR
                   (Soyuz, this is Apollo. We're getting ready to DUMP
the pressure in tunnel 2, over.)
     USSR
                   Roger. Copy.
     ACDR
                   (I'm beginning dumping the pressure.)
     CMP
                   Hey, Tom. I've got the probe and the drogue in the
tunnel. When you come through we might temporarily put them is the DM
so we got a little working room here.
                   Yeah, I think that's a great idea. Let's go ahead and
we'll stow them up here for the night, what do you think?
     CMP
                   Super idea.
     CC-H
                   Apollo, Houston. We're going to terminate the TV
here until we can get some data for this last few minutes before LOS.
Would you please cut the three power switches on 181 off.
     CMP
                   Roger. Switches going OFF, Bo. See ya soon.
     ACDR
                   (You dumped the pressure, right? This is our operation.
4.60 millimeters HG.
     DMP
                   Alexey this is step 24. Yes, Yes, I'm continuing
the dumping of pressure.)
                   Bo, we're taking it down to 50.
                                                     I heard some-
body say "Enough! Enough!" and I thought he meant us.
                   Tom, you're - you're supposed to take it down to 50.
     CC-H
     ACDR
                   That's what I thought. That's what we've calculated.
                   Apollo, Houston. There are 2 minutes until LOS. We'll
     CC-H
see you at Vandguard at 81:04.
     ACDR
                   Roger, Bo.
     CMP
                   (Soyuz, this is Apollo. How do you read me?)
     USSR
                   (Real good.)
     CMP
                   (I'm beginning the maneuver for solar orientation.)
     SPKR
                   Okay.
                   Apollo Control, ground elapsed time 80 hours, 53
minutes. Final farewells aboard Apollo/Soyuz. Tom Stafford shaking
the hands of his Soviet friends at about ground elapsed time 80 hours
29 minutes. The hatch is - hatch 4 on the Soyuz side was closed about 80
hours, 40 minutes and about 22 seconds later Tom Stafford closed hatch
number 3. The crew has about 30 or 40 minutes of housekeepping within the
docking module at which time Tom Stafford will transfer back into the Command
module. Sleep period tonight begins at 7:20 p.m. central daylight time
```

ASTP (USA) MC300/2

Time: 16:04 CDT, 80:44 GET

7/18/75

with wakeup at 3:20 a.m. Saturday morning eastern daylight time. Next accquisition through Vanguard in 10 minutes and 50 seconds. At ground elapsed time 80 hours 53 minutes, this is Apollo Control.

ASTP (USA) MC301/1

Time: 16:23 CDT, 81:03 GET

7/18/75

PAO Apollo control. Ground elapsed time 81 hours, 3 minutes. Acquisition coming through Vanguard, a brief pass. A low elevation of only 5 degrees. The crews have closed out hatch 3 and 4, and the Apollo crew completing closeout right now housekeeping in the docking module before returning to the command module for the rest of the evening. Sleep period begins at 7:20 a.m. eastern daylight time with wake up Saturday morning at 3:20 a.m. eastern daylight time.

CC-H Apollo, Houston. Through Vanguard for five and a half minutes.

ACDR Roger, Bo. We're in the middle of the purge now.

CC-H Say again, Tom. You were very low.

ACDR Roger. We are purging the DM now. We'll be able to drop the pressure shortly.

CC-H Understand. You're purging the DM.

CC-H Docking module, Houston. Have you heard from the Soyuz concerning their integrity check?

DMP Roger. They said theirs was good.

CC-H Understand.

DMP But we're just going to stand by with that pressure we got in here until we hear from them - you know, as far as dropping the rest of the way. That's no problem. We'll go ahead and - we're gonne equalize with the command module shortly.

CC-H Roger. We agree.

CC-H Apollo, Houston. There is less than a minute until LOS at Vanguard. We'll see you at Goldstone at 81:22.

ACDR Okay, Goldstone.

PAO Apollo control. Ground elapsed time 81 hours, 12 minutes. Loss of signal through Vanguard. Next acquisition in 9 minutes 42 seconds, will be the Goldstone tracking station. Tom Stafford completing a closeout of the docking module, transferring equipment back to the command module. They've got approximately - -

pao Apollo control. Ground elapsed time 81 hours, 13 minutes. Acquisition through Goldstone in 9 minutes. Tom Stafford completing closeout of the docking module. Approximately 20-some minutes left to complete this task. Then the crew will settle down for evening meal and an early rest period. The crew has onlyhad 5 hours sleep last night, and 5 and 1/2 hours sleep the night before. Flight director Neil Hutchinson telling his flight controllers that he would like to have the crew go to bed early tonight. Next acquisition in 8 minutes and 33 seconds. At ground elapsed time 81 hours, 13 minutes this is Apollo control.